



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Marc ALIZON et al. ) Group Art Unit: 1637  
Application No.: 07/158,652 ) Examiner: Jeffrey Norman Fredman  
Filed: February 22, 1988 ) Confirmation No.: 3369  
)

For: CLONED DNA SEQUENCE RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REQUEST TO CORRECT INVENTORSHIP**

Pursuant to 37 C.F.R. § 1.48, applicants request that the inventorship in this application be corrected as follows.

Pursuant to 37 C.F.R. § 1.48 (c), please add the following inventors to this application:

Robert C. Gallo,  
Milkulas Popovic,  
Mangalasseri G. Sarnagadharan,  
Solange Chamaret,  
Claudine Axler-Bin,  
Francoise Rey,  
Marie-Therese Nugeyre,  
Jacqueline Gruest,  
Charles Dauget,  
Willy Rozenbaum,  
Christine Rouzioux,  
Francoise Brun-Vezinet,  
Luc Montagnier,  
Jean-Claude Chermann,

06/06/2006 JADDO1 00000042 07158652  
03 FC:1464 130.00 DP

**BEST AVAILABLE COPY**

Francoise Barre-Sinoussi, and  
Pierre Tiollais.

The addition of the above-named inventors is necessitated by amendment of the claims during prosecution of this application.

A statement from each person being added as an inventor that the addition is necessitated by amendment of the claims and that the inventorship error occurred without deceptive intent is enclosed.

A Declaration by each of the actual inventors is enclosed. One copy of the application is enclosed, although each Declaration was attached to a copy of the application when it was executed. The duplicate copies of the application have been removed to reduce the size of the submission, but will be provided by applicants if the Examiner requires them.

The written consent of each of the assignees is enclosed.

A check for the required fee of \$130.00 under §1.17(i) is enclosed

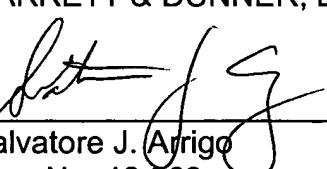
Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: June 5, 2006

By: \_\_\_\_\_

  
Salvatore J. Arrigo  
Reg. No. 46,063  
Telephone: 202-408-4160  
Facsimile: 202-408-4400  
E-mail: arrigos@finnegan.com



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Marc ALIZON et al.

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For: CLONED DNA SEQUENCE  
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OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF SOLANGE CHAMARET**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: S. Chanak

Date: 8h - 05. - 6

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTCT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTAAAG	TGCACTGATT	TGGGAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCAT	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCC
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAAGTGA	ATTATATAAA	TATAAAAGTAG	TAAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1

(HIV-1), wherein the DNA comprises the sequence

CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
					ATGAGAGTGA	
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260            6270            6280            6290            6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390            6400            6410            6420  
A ATAATAAGAC GTTCAATGGA ACAGGGACCAT  
  
6430            6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490            6500            6510            6520            6530            6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550            6560            6570            6580            6590            6600  
ACAATGCTAA AACCATATAA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
  
6610            6620  
CCAACAAACAÀ TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
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RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF CLAUDINE AXLER-BLIN**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Claudine Axler-Blair

Date: 26 Mai 2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGAAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATATA	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAG	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence: CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TTGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTAA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCGAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260        6270        6280        6290        6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390        6400        6410        6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
  
6430        6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490        6500        6510        6520        6530        6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550        6560        6570        6580        6590        6600  
ACAATGCTAA AACCATATAA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
  
6610        6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
)  
)  
)  
)  
)  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF FRANÇOISE REY**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

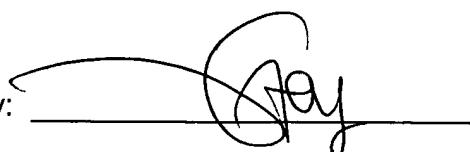
I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: 

Date: 18 May 2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGAAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCAT	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAC	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGAAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6280	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCC
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAT	CATTTGCACC	ACTGCTGTGC	CTTGGAATGC	TAGTTGGAGT	AATAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260            6270            6280            6290            6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390            6400            6410            6420  
A ATAATAAGAC GTTCAATGGA ACAGGGACCAT  
  
6430            6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490            6500            6510            6520            6530            6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550            6560            6570            6580            6590            6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAAT TGTACAAGAC  
  
6610            6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
)  
)  
)  
)  
)  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF MARIE-THERESE NUGEYRE**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: *AT: augeys*

Date: *May 29 2006*

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATATA	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCC
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGCGC	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTAA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAATC	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTGAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTAA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTCT	GGGACGCGAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
 CTCATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260            6270            6280            6290            6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390            6400            6410            6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
  
6430            6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490            6500            6510            6520            6530            6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550            6560            6570            6580            6590            6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
  
6610            6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
)  
)  
)  
)  
)  
)  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT ON BEHALF OF JACQUELINE GRUEST**  
**(Being Added As An Inventor)**

I, JACQUES GRUEST, am the heir of the estate of JACQUELINE GRUEST, who is deceased.

I have been informed that Jacqueline Gruest was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I have been informed that a copy of claims 142-151 is attached hereto.

I have been informed that claims 142-151 were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I have been informed that Jacqueline Gruest is being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that the addition of Jacqueline Gruest as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

On information and belief, the inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on the part of Jacqueline Gruest.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: \_\_\_\_\_

  
JACQUES GRUEST  
Heir of the Estate of Jacqueline Gruest

Date: 25.05.2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAAGT	TGTAACACCT

6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG
6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAC
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	AAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT

7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAAGCTTGCCTTG, and the DNA comprises the sequence:

5700  
ATGAGAGTGA

5710 5720 5730 5740 5750 5760  
AGGAGAAAATA TCAGCACTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA

5770 5780 5790 5800 5810 5820  
TATTGATGAT CTGTAGTGCT ACAGAAAAAT TGTGGGTCAC AGTCTATTAT GGGGTACCTG

5830 5840 5850 5860 5870 5880  
TGTGGAAGGA AGCAACCACC ACTCTATTTC GTGCATCAGA TGCTAAAGCA TATGATACAG

5890 5900 5910 5920 5930 5940  
AGGTACATAA TGTTTGGGCC ACACATGCCT GTGTACCCAC AGACCCCAAC CCACAAGAAG

5950 5960 5970 5980 5990 6000  
TAGTATTGGT AAATGTGACA GAAAATTTA ACATGTGGAA AAATGACATG GTAGAACAGA

6010 6020 6030 6040 6050 6060  
TGCATGAGGA TATAATCAGT TTATGGGATC AAAGCCTAAA GCCATGTGTA AAATTAACCC

6070 6080 6090 6100 6110 6120  
CACTCTGTGT TAGTTTAAAG TGCACTGATT TGGGGAATGC TACTAATACC AATAGTAGTA

6130 6140 6150 6160 6170 6180  
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT

6190 6200 6210 6220 6230 6240  
TCAATATCAG CACAAGCATA AGAGGTAAGG TGCAGAAAGA ATATGCATTT TTTTATAAAC

6250 6260 6270 6280 6290 6300  
TTGATATAAT ACCAATAGAT AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT

6310 6320 6330 6340 6350 6360  
CAGTCATTAC ACAGGCCTGT CCAAAGGTAT CCTTGAGCC AATTCCCATA CATTATTGTG

6370 6380 6390 6400 6410 6420  
CCCCGGCTGG TTTTGCATT CTAAAATGTA ATAATAAGAC GTTCAATGGA ACAGGACCAT

6430 6440 6450 6460 6470 6480  
GTACAAATGT CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC

6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCCAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAG	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCCAA

7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAC	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100 6110 6120  
GAATGC TACTAATACC AATAGTAGTA  
  
6130 6140 6150 6160 6170 6180  
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT  
  
6190 6200  
TCAATATCAG CACAAGCATA.

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260 6270 6280 6290 6300  
T AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390 6400 6410 6420  
A ATAATAAGAC GTTCAATGGA ACAGGGACCAT  
  
6430 6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490 6500 6510 6520 6530 6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
6550 6560 6570 6580 6590 6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
6610 6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
) Examiner: Jeffrey N. Fredman  
) Confirmation No.: 3369  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF CHARLES DAUGUET**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Charles Dauguet

Date: 26 Mai 2008

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGAAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCAT	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCC
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAAGTAG	TAAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAC	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTCT	GGGACGCGAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAAGTGA	ATTATATAAA	TATAAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAT	CATTGCGACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
 CTCATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260        6270        6280        6290        6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390        6400        6410        6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
  
6430        6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490        6500        6510        6520        6530        6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550        6560        6570        6580        6590        6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAAT TGTACAAGAC  
  
6610        6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
)  
)  
)  
)  
)  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF WILLY ROZENBAUM**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

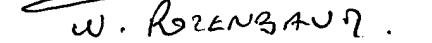
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The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By:   


Date: 25 May 2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCC
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAAGTAG	TAAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAG	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTAA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTC
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260            6270            6280            6290            6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390            6400            6410            6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
  
6430            6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490            6500            6510            6520            6530            6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550            6560            6570            6580            6590            6600  
ACAATGCTAA AACCATATAA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
  
6610            6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
) Examiner: Jeffrey N. Fredman  
) Confirmation No.: 3369  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF FRANÇOISE BRUN-VEZINET**  
(Being Added As An Inventor)

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

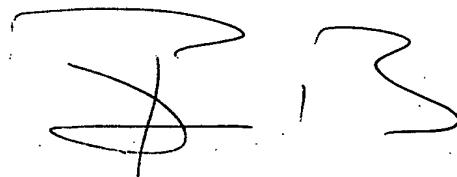
I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: *françois Brun - Ve'zinet*

Date: *30/05/06*



U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCAT	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACAA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAAGTGA	ATTATATAAA	TATAAAAGTAG	TAAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACCT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTGAGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

5700  
ATGAGAGTGA

5710 5720 5730 5740 5750 5760  
AGGAGAAAATA TCAGCACTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA

5770 5780 5790 5800 5810 5820  
TATTGATGAT CTGTAGTGCT ACAGAAAAAT TGTGGGTAC AGTCTATTAT GGGGTACCTG

5830 5840 5850 5860 5870 5880  
TGTGGAAGGA AGCAACCACC ACTCTATTT GTGCATCAGA TGCTAAAGCA TATGATACAG

5890 5900 5910 5920 5930 5940  
AGGTACATAA TGTTTGGGCC ACACATGCCT GTGTACCCAC AGACCCCAAC CCACAAGAAG

5950 5960 5970 5980 5990 6000  
TAGTATTGGT AAATGTGACA GAAAATTTA ACATGTGGAA AAATGACATG GTAGAACAGA

6010 6020 6030 6040 6050 6060  
TGCATGAGGA TATAATCAGT TTATGGGATC AAAGCCTAAA GCCATGTGTA AAATTAACCC

6070 6080 6090 6100 6110 6120  
CACTCTGTGT TAGTTAAAG TGCACTGATT TGGGGAAATGC TACTAATACC AATAGTAGTA

6130 6140 6150 6160 6170 6180  
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT

6190 6200 6210 6220 6230 6240  
TCAATATCAG CACAAGCATA AGAGGTAAGG TGCAGAAAGA ATATGCATTT TTTTATAAAC

6250 6260 6270 6280 6290 6300  
TTGATATAAT ACCAATAGAT AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT

6310 6320 6330 6340 6350 6360  
CAGTCATTAC ACAGGCCTGT CCAAAGGTAT CCTTGAGCC AATTCCCATA CATTATTGTG

6370 6380 6390 6400 6410 6420  
CCCCGGCTGG TTTTGCATT CTAAAATGTA ATAATAAGAC GTTCAATGGA ACAGGACCAT

6430 6440 6450 6460 6470 6480  
GTACAAATGT CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC

6490 6500 6510 6520 6530 6540  
TGCTGTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG

6550 6560 6570 6580 6590 6600  
ACAATGCTAA AACCATATAA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAC	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence

CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260 6270 6280 6290 6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence

CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390 6400 6410 6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
6430 6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence

CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490 6500 6510 6520 6530 6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
6550 6560 6570 6580 6590 6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
6610 6620  
CCAACAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence

CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA

6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.

PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

) Group Art Unit: 1637  
)  
)  
Examiner: Jeffrey N. Fredman  
)  
Confirmation No.: 3369  
)  
)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF CHRISTINE ROUZIOUX**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Christine Rovznev  
Christine  
Date: 30 05 2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTAAAG	TGCACTGATT	TGGGAAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCAT	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAC	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTCT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCC
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAATCT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTAA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACATAAG	AA..		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260        6270        6280        6290        6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390        6400        6410        6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
  
6430        6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490        6500        6510        6520        6530        6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550        6560        6570        6580        6590        6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
  
6610        6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAACTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
)  
)  
Examiner: Jeffrey N. Fredman  
)  
)  
Confirmation No.: 3369  
)  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF LUC MONTAGNIER**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By:   
Date: May 26 2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGAAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAC	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACA	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	AAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAG	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAAT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTAA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTGAGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
 CTCATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6260            6270            6280            6290            6300  
T AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6390            6400            6410            6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
  
6430            6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490            6500            6510            6520            6530            6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550            6560            6570            6580            6590            6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
  
6610            6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

)  
Group Art Unit: 1637  
)  
Examiner: Jeffrey N. Fredman  
)  
Confirmation No.: 3369  
)  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF JEAN-CLAUDE CHERMANN**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Jean Claude Chervenac  
Date: May 26 06

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTC	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAAGT	TGTAACACCT

6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG
6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCCAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT

7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAG	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAATC	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACCTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

5700  
ATGAGAGTGA

5710 5720 5730 5740 5750 5760  
AGGAGAAATA TCAGCACTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA

5770 5780 5790 5800 5810 5820  
TATTGATGAT CTGTAGTGCT ACAGAAAAAT TGTGGGTAC AGTCTATTAT GGGGTACCTG

5830 5840 5850 5860 5870 5880  
TGTGGAAGGA AGCAACCACC ACTCTATTTC GTGCATCAGA TGCTAAAGCA TATGATACAG

5890 5900 5910 5920 5930 5940  
AGGTACATAA TGTTTGGGCC ACACATGCCT GTGTACCCAC AGACCCCAAC CCACAAGAAG

5950 5960 5970 5980 5990 6000  
TAGTATTGGT AAATGTGACA GAAAATTTA ACATGTGGAA AAATGACATG GTAGAACAGA

6010 6020 6030 6040 6050 6060  
TGCATGAGGA TATAATCAGT TTATGGGATC AAAGCCTAAA GCCATGTGTA AAATTAACCC

6070 6080 6090 6100 6110 6120  
CACTCTGTGT TAGTTAAAG TGCACTGATT TGGGGAATGC TACTAATACC AATAGTAGTA

6130 6140 6150 6160 6170 6180  
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT

6190 6200 6210 6220 6230 6240  
TCAATATCAG CACAAGCATA AGAGGTAAGG TGCAGAAAGA ATATGCATTT TTTTATAAAC

6250 6260 6270 6280 6290 6300  
TTGATATAAT ACCAATAGAT AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT

6310 6320 6330 6340 6350 6360  
CAGTCATTAC ACAGGCCTGT CCAAAGGTAT CCTTGAGCC AATTCCCATA CATTATTGTG

6370 6380 6390 6400 6410 6420  
CCCCGGCTGG TTTTGCATT CTAATGATGA ATAATAAGAC GTTCAATGGA ACAGGACCAT

6430 6440 6450 6460 6470 6480  
GTACAAATGT CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC

6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCCAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCCAA

7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6100 6110 6120  
GAATGC TACTAATACC AATAGTAGTA  
  
6130 6140 6150 6160 6170 6180  
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT  
  
6190 6200  
TCAATATCAG CACAAGCATA.

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6260 6270 6280 6290 6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6390 6400 6410 6420  
A ATAATAAGAC GTTCAATGGA ACAGGGACCAT  
  
6430 6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6490 6500 6510 6520 6530 6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
6550 6560 6570 6580 6590 6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
6610 6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Marc ALIZON et al. ) Group Art Unit: 1637  
Application No.: 07/158,652 )  
Filed: February 22, 1988 ) Examiner: Jeffrey N. Fredman  
 ) Confirmation No.: 3369  
For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF FRANÇOISE BARRE-SINOUSSI**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

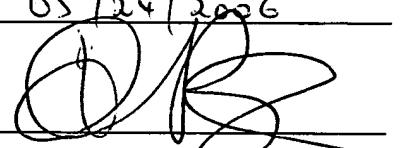
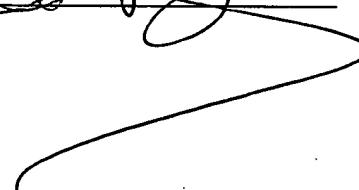
I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: 05/24/2006

Date:   


U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAAGT	TGTAACACCT

6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG
6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTGCATTG	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT

7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTAAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

5700  
ATGAGAGTGA

5710 5720 5730 5740 5750 5760  
AGGAGAAATA TCAGCACCTTG TGGAGATGGG GGTGGAAATG GGGCACCATG CTCCTTGGGA

5770 5780 5790 5800 5810 5820  
TATTGATGAT CTGTAGTGCT ACAGAAAAAT TGTGGGTCAC AGTCTATTAT GGGGTACCTG

5830 5840 5850 5860 5870 5880  
TGTGGAAGGA AGCAACCACC ACTCTATTTC GTGCATCAGA TGCTAAAGCA TATGATACAG

5890 5900 5910 5920 5930 5940  
AGGTACATAA TGTTTGGGCC ACACATGCCT GTGTACCCAC AGACCCCAAC CCACAAGAAG

5950 5960 5970 5980 5990 6000  
TAGTATTGGT AAATGTGACA GAAAATTTA ACATGTGGAA AAATGACATG GTAGAACAGA

6010 6020 6030 6040 6050 6060  
TGCATGAGGA TATAATCAGT TTATGGGATC AAAGCCTAAA GCCATGTGTA AAATTAACCC

6070 6080 6090 6100 6110 6120  
CACTCTGTGT TAGTTAAAG TGCACTGATT TGGGGAATGC TACTAATACC AATAGTAGTA

6130 6140 6150 6160 6170 6180  
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT

6190 6200 6210 6220 6230 6240  
TCAATATCAG CACAAGCATA AGAGGTAAGG TGCAGAAAGA ATATGCATTT TTTTATAAAC

6250 6260 6270 6280 6290 6300  
TTGATATAAT ACCAATAGAT AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT

6310 6320 6330 6340 6350 6360  
CAGTCATTAC ACAGGCCTGT CCAAAGGTAT CCTTGAGCC AATTCCCATA CATTATTGTG

6370 6380 6390 6400 6410 6420  
CCCCGGCTGG TTTTGCATT CTAAAATGTA ATAATAAGAC GTTCAATGGA ACAGGACCAT

6430 6440 6450 6460 6470 6480  
GTACAAATGT CAGCACAGTA CAATGTACAC ATGGAATTAG GCCAGTAGTA TCAACTCAAC

6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGAA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCCAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAG	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA

7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAGCTGCCTTG, and the DNA comprises the sequence:

6100 6110 6120  
GAATGC TACTAATACC AATAGTAGTA  
6130 6140 6150 6160 6170 6180  
ATACCAATAG TAGTAGCGGG GAAATGATGA TGGAGAAAGG AGAGATAAAA AACTGCTCTT  
6190 6200  
TCAATATCAG CACAAGCATA.

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAGCTGCCTTG, and the DNA comprises the sequence:

6260 6270 6280 6290 6300  
T AATGATACTA CCAGCTATAC GTTGACAAGT TGTAACACCT  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAAATAAGCTGCCTTG, and the DNA comprises the sequence:

6390 6400 6410 6420  
A ATAATAAGAC GTTCAATGGA ACAGGGACCAT  
6430 6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTGCCTTG, and the DNA comprises the sequence:

6490 6500 6510 6520 6530 6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
6550 6560 6570 6580 6590 6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
6610 6620  
CCAACACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV 1), wherein the DNA comprises the sequence CTCAATAAGCTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

) Group Art Unit: 1637  
) Examiner: Jeffrey N. Fredman  
) Confirmation No.: 3369  
)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF PIERRE TIOLLAIS**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claims 142-151 to the application.

I am informed that a copy of claims 142-151 is attached hereto.

I have read claims 142-151, which I am informed were added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claims 142-151 to the application.

The inventorship error resulting from the amendment of the claims by adding claims 142-151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: *Moll..*

Date: *24 mai 06*

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Pending Claims

142. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAAGCTGCCTTG, and the DNA comprises the sequence:

	5670	5680	5690	5700	
	A	AAGAGCAGAA	GACAGTGGCA	ATGAGAGTGA	
5710	5720	5730	5740	5750	5760
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA
5770	5780	5790	5800	5810	5820
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG
5830	5840	5850	5860	5870	5880
TGTGGAAGGA	AGCAACCACC	ACTCTATTTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG
5890	5900	5910	5920	5930	5940
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAAGAAG
5950	5960	5970	5980	5990	6000
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA
6010	6020	6030	6040	6050	6060
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC
6070	6080	6090	6100	6110	6120
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGAAATGC	TACTAATACC	AATAGTAGTA
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200	6210	6220	6230	6240
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC
6250	6260	6270	6280	6290	6300
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT
6310	6320	6330	6340	6350	6360
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCAT	CATTATTGTG

6370	6380	6390	6400	6410	6420
CCCCGGCTGG	TTTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT
6430	6440	6450	6460	6470	6480
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC
6490	6500	6510	6520	6530	6540
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG
6550	6560	6570	6580	6590	6600
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC
6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAAC	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCAG	ACGGTCAATG	ACGCTGACGG

7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAACT	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAATCTC
7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATTA	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACCTAAAG	AA.		

143. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

						5700
						ATGAGAGTGA
5710	5720	5730	5740	5750	5760	
AGGAGAAATA	TCAGCACTTG	TGGAGATGGG	GGTGGAAATG	GGGCACCATG	CTCCTTGGGA	
5770	5780	5790	5800	5810	5820	
TATTGATGAT	CTGTAGTGCT	ACAGAAAAAT	TGTGGGTCAC	AGTCTATTAT	GGGGTACCTG	
5830	5840	5850	5860	5870	5880	
TGTGGAAGGA	AGCAACCACC	ACTCTATTTT	GTGCATCAGA	TGCTAAAGCA	TATGATACAG	
5890	5900	5910	5920	5930	5940	
AGGTACATAA	TGTTTGGGCC	ACACATGCCT	GTGTACCCAC	AGACCCCAAC	CCACAAGAAG	
5950	5960	5970	5980	5990	6000	
TAGTATTGGT	AAATGTGACA	GAAAATTTA	ACATGTGGAA	AAATGACATG	GTAGAACAGA	
6010	6020	6030	6040	6050	6060	
TGCATGAGGA	TATAATCAGT	TTATGGGATC	AAAGCCTAAA	GCCATGTGTA	AAATTAACCC	
6070	6080	6090	6100	6110	6120	
CACTCTGTGT	TAGTTTAAAG	TGCACTGATT	TGGGGAATGC	TACTAATACC	AATAGTAGTA	
6130	6140	6150	6160	6170	6180	
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT	
6190	6200	6210	6220	6230	6240	
TCAATATCAG	CACAAGCATA	AGAGGTAAGG	TGCAGAAAGA	ATATGCATTT	TTTTATAAAC	
6250	6260	6270	6230	6290	6300	
TTGATATAAT	ACCAATAGAT	AATGATACTA	CCAGCTATAC	GTTGACAAGT	TGTAACACCT	
6310	6320	6330	6340	6350	6360	
CAGTCATTAC	ACAGGCCTGT	CCAAAGGTAT	CCTTGAGCC	AATTCCCATA	CATTATTGTG	
6370	6380	6390	6400	6410	6420	
CCCCGGCTGG	TTTGCGATT	CTAAAATGTA	ATAATAAGAC	GTTCAATGGA	ACAGGACCAT	
6430	6440	6450	6460	6470	6480	
GTACAAATGT	CAGCACAGTA	CAATGTACAC	ATGGAATTAG	GCCAGTAGTA	TCAACTCAAC	
6490	6500	6510	6520	6530	6540	
TGCTGTTGAA	TGGCAGTCTA	GCAGAAGAAG	AGGTAGTAAT	TAGATCTGCC	AATTCACAG	
6550	6560	6570	6580	6590	6600	
ACAATGCTAA	AACCATAATA	GTACAGCTGA	ACCAATCTGT	AGAAATTAAT	TGTACAAGAC	

6610	6620	6630	6640	6650	6660
CCAACAAACAA	TACAAGAAAA	AGTATCCGTA	TCCAGAGGGG	ACCAGGGAGA	GCATTGTTA
6670	6680	6690	6700	6710	6720
CAATAGGAAA	AATAGGAAAT	ATGAGACAAG	CACATTGTAA	CATTAGTAGA	GCAAAATGGA
6730	6740	6750	6760	6770	6780
ATGCCACTTT	AAAACAGATA	GCTAGCAAAT	TAAGAGAACAA	ATTGGAAAT	AATAAAACAA
6790	6800	6810	6820	6830	6840
TAATCTTAA	GCAATCCTCA	GGAGGGGACC	CAGAAATTGT	AACGCACAGT	TTTAATTGTG
6850	6860	6870	6880	6890	6900
GAGGGGAATT	TTTCTACTGT	AATTCAACAC	AACTGTTAA	TAGTACTTGG	TTTAATAGTA
6910	6920	6930	6940	6950	6960
CTTGGAGTAC	TGAAGGGTCA	AATAACACTG	AAGGAAGTGA	CACAATCACA	CTCCCATGCA
6970	6980	6990	7000	7010	7020
GAATAAAACA	ATTTATAAAC	ATGTGGCAGG	AAGTAGGAAA	AGCAATGTAT	GCCCCCTCCCA
7030	7040	7050	7060	7070	7080
TCAGCGGACA	AATTAGATGT	TCATCAAATA	TTACAGGGCT	GCTATTAACA	AGAGATGGTG
7090	7100	7110	7120	7130	7140
GTAATAACAA	CAATGGGTCC	GAGATCTTCA	GACCTGGAGG	AGGAGATATG	AGGGACAATT
7150	7160	7170	7180	7190	7200
GGAGAAGTGA	ATTATATAAA	TATAAAGTAG	TAAAAATTGA	ACCATTAGGA	GTAGCACCCA
7210	7220	7230	7240	7250	7260
CCAAGGCAAA	GAGAAGAGTG	GTGCAGAGAG	AAAAAAAGAGC	AGTGGGAATA	GGAGCTTGT
7270	7280	7290	7300	7310	7320
TCCTTGGGTT	CTTGGGAGCA	GCAGGAAGCA	CTATGGGCGC	ACGGTCAATG	ACGCTGACGG
7330	7340	7350	7360	7370	7380
TACAGGCCAG	ACAATTATTG	TCTGGTATAG	TGCAGCAGCA	GAACAATTG	CTGAGGGCTA
7390	7400	7410	7420	7430	7440
TTGAGGCGCA	ACAGCATCTG	TTGCAACTCA	CAGTCTGGGG	CATCAAGCAG	CTCCAGGCAA
7450	7460	7470	7480	7490	7500
GAATCCTGGC	TGTGGAAAGA	TACCTAAAGG	ATCAACAGCT	CCTGGGGATT	TGGGGTTGCT
7510	7520	7530	7540	7550	7560
CTGGAAAATC	CATTTGCACC	ACTGCTGTGC	CTTGGAAATGC	TAGTTGGAGT	AATAAAATCTC

7570	7580	7590	7600	7610	7620
TGGAACAGAT	TTGGAATAAC	ATGACCTGGA	TGGAGTGGGA	CAGAGAAATT	AACAATTACA
7630	7640	7650	7660	7670	7680
CAAGCTTAAT	ACATTCCCTTA	ATTGAAGAAT	CGAAAACCA	GCAAGAAAAG	AATGAACAAG
7690	7700	7710	7720	7730	7740
AATTATTGGA	ATTAGATAAA	TGGGCAAGTT	TGTGGAATTG	GTTAACATA	ACAAATTGGC
7750	7760	7770	7780	7790	7800
TGTGGTATAT	AAAAATATTC	ATAATGATAG	TAGGAGGCTT	GGTAGGTTTA	AGAATAGTTT
7810	7820	7830	7840	7850	7860
TTGCTGTACT	TTCTATAGTG	AATAGAGTTA	GGCAGGGATA	TTCACCATT	TCGTTTCAGA
7870	7880	7890	7900	7910	7920
CCCACCTCCC	AACCCCGAGG	GGACCCGACA	GGCCCGAAGG	AATAGAAGAA	GAAGGTGGAG
7930	7940	7950	7960	7970	7980
AGAGAGACAG	AGACAGATCC	ATTCGATTAG	TGAACGGATC	CTTAGCACTT	ATCTGGGACG
7990	8000	8010	8020	8030	8040
ATCTGCGGAG	CCTTGTGCCT	CTTCAGCTAC	CACCGCTTGA	GAGACTTACT	CTTGATTGTA
8050	8060	8070	8080	8090	8100
ACGAGGATTG	TGGAACTTCT	GGGACGCAGG	GGGTGGGAAG	CCCTCAAATA	TTGGTGGAAAT
8110	8120	8130			
CTCCTACAGT	ATTGGAGTCA	GGAACTAAG	AA.		

144. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence  
CTCAATAAGCTTGCCTTG, and the DNA comprises the sequence:

6100	6110	6120			
GAATGC	TACTAATACC	AATAGTAGTA			
6130	6140	6150	6160	6170	6180
ATACCAATAG	TAGTAGCGGG	GAAATGATGA	TGGAGAAAGG	AGAGATAAAA	AACTGCTCTT
6190	6200				
TCAATATCAG	CACAAGCATA.				

145. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6260            6270            6280            6290            6300  
T AATGATACTA CCAGCTATAC GTTGACAAAGT TGTAACACCT  
  
6310  
CAGTCATTAC.

146. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6390            6400            6410            6420  
A ATAATAAGAC GTTCAATGGA ACAGGACCAT  
  
6430            6440  
GTACAAATGT CAGCACAGTA.

147. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAGCTTGCCTTG, and the DNA comprises the sequence:

6490            6500            6510            6520            6530            6540  
GTTGAA TGGCAGTCTA GCAGAAGAAG AGGTAGTAAT TAGATCTGCC AATTCACAG  
  
6550            6560            6570            6580            6590            6600  
ACAATGCTAA AACCATAATA GTACAGCTGA ACCAATCTGT AGAAATTAAT TGTACAAGAC  
  
6610            6620  
CCAACAAACAA TACAAGAAAA.

148. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCATAAAGCTTGCCTTG, and the DNA comprises the sequence::

6860 6870 6880 6890 6900  
T AATTCAACAC AACTGTTAA TAGTACTTGG TTTAATAGTA  
6910 6920 6930  
CTTGGAGTAC TGAAGGGTCA AATAACACTG.

149. A cloned DNA of Human Immunodeficiency Virus Type 1 (HIV-1), wherein the DNA comprises the sequence CTCAATAAAGCTTGCCTTG, and the DNA comprises the sequence:

7540 7550 7560  
GAATGC TAGTTGGAGT AATAAATCTC  
7570 7580 7590 7600 7610 7620  
TGGAACAGAT TTGGAATAAC ATGACCTGGA TGGAGTGGGA CAGAGAAATT AACAAATTACA  
7630  
CAAGCTTAAT.

150. A method of using the cloned DNA of any of claims 142-149 to detect HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant;
- (d) disrupting the virions to release HIV-1 RNA;
- (e) contacting the HIV-1 RNA with the HIV-1 DNA of any of claims 142-149; and
- (f) detecting hybridization between the HIV-1 RNA and the HIV-1 DNA.

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637  
)  
)  
)  
)  
)  
)  
)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF ROBERT C. GALLO**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claim 151 to the application.

I am informed that a copy of claim 151 is attached hereto.

I have read claim 151, which I am informed was added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claim 151 to the application.

The inventorship error resulting from the amendment of the claims by adding claim 151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Robert C. Gallo

Date: May 31, '06

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Claim 151

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Marc ALIZON et al. ) Group Art Unit: 1637  
Application No.: 07/158,652 ) Examiner: Jeffrey N. Fredman  
Filed: February 22, 1988 ) Confirmation No.: 3369  
For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF MIKULAS POPOVIC**  
**(Being Added As An Inventor)**

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claim 151 to the application.

I am informed that a copy of claim 151 is attached hereto.

I have read claim 151, which I am informed was added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claim 151 to the application.

The inventorship error resulting from the amendment of the claims by adding claim 151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Mihirai Tigran  
Date: June 1, 2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Claim 151

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Marc ALIZON et al. ) Group Art Unit: 1637  
Application No.: 07/158,652 ) Examiner: Jeffrey N. Fredman  
Filed: February 22, 1988 ) Confirmation No.: 3369  
 )  
For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**STATEMENT OF SARNGADHARAN**  
(Being Added As An Inventor)

I have read U.S. application Serial No. 07/158,652.

I am informed that I was not named as an inventor in application Serial No. 07/158,652 when the application was filed in the U.S. Patent and Trademark Office.

I have been informed that the claims in U.S. application Serial No. 07/158,652 have been amended by adding claim 151 to the application.

I am informed that a copy of claim 151 is attached hereto.

I have read claim 151, which I am informed was added to U.S. application Serial No. 07/158,652 to claim previously unclaimed subject matter.

I understand that I am being added as an inventor to U.S. application Serial No. 07/158,652.

I have been informed that my addition as an inventor to U.S. application Serial No. 07/158,652 is necessitated by the amendment of the claims by adding claim 151 to the application.

The inventorship error resulting from the amendment of the claims by adding claim 151 to U.S. application Serial No. 07/158,652 occurred without deceptive intention on my part.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By: Mangalasaral G. Sarngadharan

Date: June 4, 2006

U.S. Patent Application No. 07/158,652  
Filed: February 22, 1988  
Inventors: Alizon et al.  
Your Ref.: DI No.: 84-37  
Our Ref.: 03495.0010-01000

Claim 151

151. A method of making HIV-1 RNA comprising:

- (a) providing a biological fluid comprising HIV-1 infected cells;
- (b) preparing a cell-free supernatant from the biological fluid;
- (c) isolating HIV-1 virions from the cell-free supernatant; and
- (d) disrupting the virions to release HIV-1 RNA, thereby making HIV-1 RNA.



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

In re Application of: )  
Marc ALIZON et al. ) Group Art Unit: 1637  
Application No.: 07/158,652 ) Examiner: Jeffrey Norman Fredman  
Filed: February 22, 1988 ) Confirmation No.: 3369  
For: CLONED DNA SEQUENCE )  
RELATED TO THE GENOMIC RNA )  
OF HUMAN IMMUNODEFICIENCY )  
VIRUS TYPE 1 (HIV-1) )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**CONSENT OF ASSIGNEE INSTITUT PASTEUR  
TO AMENDMENT OF INVENTORSHIP**

Institut Pasteur, duly organized under the laws of France and having its principal place of business at 28, rue du Docteur Roux, 75724 Paris Cedex 15, France, as an Assignee of the above-identified application, does hereby consent to amendment of inventorship from the inventive entity:

Marc Alizon  
Pierre Sonigo  
Simon Wain-Hobson  
Stewart Cole  
Oliver Danos

to the inventive entity:

Solange Chamaret  
Claudine Axler-Blin  
Françoise Rey  
Marie-Therese Nugeyre  
Jacqueline Gruest  
Charles Dauguet  
Willy Rozenbaum  
Christine Rouzioux  
François Brun-Vezinet  
Luc Montagnier  
Jean-Claude Chermann  
Françoise Barre-Sinoussi  
Pierre Tiollais  
Marc Alizon  
Pierre Sonigo  
Simon Wain-Hobson  
Stewart Cole  
Oliver Danos  
Robert C. Gallo  
Mikulas Popovic  
Mangalasseri G. Sarngadharan

The undersigned is authorized to act on behalf of the Assignee, Institut Pasteur.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

*A. Dautry*

By: \_\_\_\_\_  
Name: Alice Dautry  
Title: President  
For Assignee: Institut Pasteur

Dated: \_\_\_\_\_

*June 1<sup>st</sup>, 2006*



PATENT  
Customer No. 22,852  
Attorney Docket No. 3495.0010-01

In re Application of:

Marc ALIZON et al.

Application No.: 07/158,652

Filed: February 22, 1988

) Group Art Unit: 1637

) Examiner: Jeffrey Norman Fredman

) Confirmation No.: 3369

)

For: CLONED DNA SEQUENCE  
RELATED TO THE GENOMIC RNA  
OF HUMAN IMMUNODEFICIENCY  
VIRUS TYPE 1 (HIV-1)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

**CONSENT OF ASSIGNEE THE UNITED STATES OF AMERICA  
TO AMENDMENT OF INVENTORSHIP**

The United States of America as represented by the Secretary of the Department of Heath and Human Services, having its principal place of business at 900 Rockville Pike, Bethesda, Maryland 20892, as an Assignee of the above-identified application, does hereby consent to amendment of inventorship from the inventive entity:

Marc Alizon  
Pierre Sonigo  
Simon Wain-Hobson  
Stewart Cole  
Oliver Danos

to the inventive entity:

Robert C. Gallo  
Mikulas Popovic  
Mangalasseri G. Sarngadharan  
Solange Chamaret  
Claudine Axler-Blin  
Françoise Rey  
Marie-Therese Nugeyre  
Jacqueline Gruest  
Charles Dauguet  
Willy Rozenbaum  
Christine Rouzioux  
François Brun-Vezinet  
Luc Montagnier  
Jean-Claude Chermann  
Françoise Barre-Sinoussi  
Pierre Tiollais  
Marc Alizon  
Pierre Sonigo  
Simon Wain-Hobson  
Stewart Cole  
Oliver Danos

The undersigned is authorized to act on behalf of the Assignee, the United States of America as represented by the Secretary of the Department of Health and Human Services.

I hereby declare that all statements made of my own knowledge and belief are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

By: Jack Spiegel  
Name: JACK SPIEGEL (REG# 34,477)  
Title: SENIOR ADVISOR FOR TECHNOLOGY TRANSFER OPERATIONS  
For Assignee: The United States of America  
as represented by the  
Secretary of the Department of  
Health and Human Services.

Dated: JUNE 5, 2006

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